

the other hand, sandy and loamy soils are nearly always deficient in potash, and those naturally rich in organic matter, such as swamp soils, also contain little potash.

#### SOILS WHICH NEED POTASH.

These latter types of soils are those on which market garden and fruit crops are generally grown. crops which are particularly in need of potash, and, as the yield is limited by the constituent of plant food present in smallest quantity, these soils, especially for the kind of crops mentioned, are in need of potash. Further, the quality of the crop, as measured by appearance and palatability, is affected not only by the nature of the soil, but by the crop being able to obtain from the soil a proper balance of the essential constituents of plant food and in sufficient quantities to permit of a continuous and rapid development.

Wood ashes are one of our natural sources of potash. Clean fresh burned ashes will contain 6 to 35 per cent. of potash, depending on the kind of wood from which they

were obtained. They also contain one to two per cent. of phosphoric acid, and about 35 per cent. of lime. Further, the potash is all soluble in water and, therefore, immediately available to plants.

Thousands of acres of land in Ontario are deficient in potash and many of the crops of the farm, especially vegetables and fruits, are in particular need of potash. It seems too bad that wood ashes, which contain such large quantities of potash, and that in the very best form for plants, should be so extensively shipped out of the country.

If some people will continue to sell ashes, let them be advertised in Ontario so that they may be bought by those who know their value, and thus save us the humiliation of having Canada wood ashes advertised for sale throughout the Eastern States of the American Republic, and at the same time keep that at home which we need for good crop production, and which we are now beginning to bring back into the country in other forms.

## BLACK KNOT ON PLUMS

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**W**E have conclusively proved that black knot can be controlled, even in the midst of infected orchards, by spraying the trees, cutting out the knots and burning them. In that part of the experimental orchard which we have had only two years, there were, at the time we leased it, about 40 old plum trees that were so thoroughly infested with knot that it seemed the wisest course to root them out and burn them.

Instead of doing so we cut them back so as to remove all the knots. In removing a knot we cut at least six inches below it so as to remove every trace of the disease. We then gathered up and burned all the trimmings. During that summer the orchard was sprayed three times with Bor-

deaux mixture, and in the fall the knots were again removed and burned. The trees had made a vigorous growth after their severe pruning, and there were few knots compared with the year before.

The next summer we decided to remove the knots as soon as they appeared, and with this object we went through the orchard twice once in July and once in August, and cut out the knots. We did this regardless of the fruit on the trees, as our object was to stamp out the disease without considering how much fruit we had to sacrifice. We found that by taking the knots at this stage when they were soft it was often possible to pare off a knot instead of cutting away the entire branch on which it grew.